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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/529,159

Applicant(s)

DINKEL ET AL.

Examiner

LEONARD J. WEINSTEIN

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 September 2009.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16, 19, 23-28 and 31 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) 25-28 is/are allowed.
6) ☒ Claim(s) 16, 19, 23 and 24 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SF/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to the amendment of September 8, 2009. In making the below rejections and/or objections the examiner has considered and addressed each of the applicant's arguments.
2. The examiner acknowledges the amendments to claim 16 and notes that claim 30 has been introduced.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Risch et al. WO 99/42725 A2 (see also US Pa. 6,450,787) as evidenced by Grieff US 6,497,562 (only used here to reference like parts not designated or described by Risch). Risch teaches all the limitations as claimed for a supply device for supply of pressure fluid into a brake (see English translation of abstract WO 99/42725) including: (in the embodiment of figures 27-31) a piston 5 movably arranged in an accommodating member 2, a carrier (portion of element 7 with o-ring disposed above element 15 as shown in figure 27) bearing a non-return valve 10 arranged coaxially with respect to the piston 5 for ventilating a working chamber 20 into which the piston 5 plunges, a resetting spring 13 arranged between the carrier (portion of element 7 with o-ring disposed above element 15 as shown in figure 27) and the piston 5, a multi-part cage

assembly (7, 60) comprising a plurality of separate cage parts (7, 60) for accommodating the resetting spring 13 into the plurality of separate cage parts (7, 60), wherein the resetting spring 13 is caged and simultaneously elastically preloaded (as Risch teaches a bowl-type spring retainer similar to that of the element 102 of figure 14 of Grieff; in Risch the spring 13 is preloaded because is bares against a valve body 10 so as to keep and orifice closed when a piston is not conducting an expansion stroke) under the relative displacement of the plurality of separate cage parts (7, 60) , and fastening means for locking the multi-part cage assembly comprising at least two locking arms(either of 65 and 66 disposed on element 7 as shown in figures 29 and 30) formed on a first cage part 7 and at least two holes (63, 64) formed on a second cage part 60, each locking arm (65 and 66) of the first cage part 7 having a resiliently deformable and unconstrained end (see figure 29 and 30) configured for engaging a hole (63, 64) of the second cage part 60 upon relative displacement of the first 7 and second 60 cage parts.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 16, 19, 23, 24, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hinz et al. WO 01/70550 in view of Schuller et al. US 6,361,295, further in view of Grieff DE 19820136 (see US Pa. 6,497,562) and Risch WO 99/42725 (see US Pa. US Pa. 6,450,787). Hinz teaches all the limitations as claimed for a supply device including: **[claim 16]** a piston 3 is movably arranged in an accommodating member 1, a carrier 9 bears a non-return valve 11 arranged coaxially to the piston 3 for the purpose of ventilating a working chamber 40 into which the piston 3 plunges, a resetting spring 4 is arranged between the carrier 9 and the piston 3, wherein a multi-part cage assembly (4, 5, 36, 37, 63) comprising a plurality of separate cage parts (36, 63), the resetting spring 4, the plurality of separate cage parts (36, 63) comprise fastening means (press fit engagement between elements 36 and 63 in region surrounding element 4 where it abuts element 63, that lock the multi-part cage assembly (4, 5, 36, 37, 63) and the resetting spring 4 is caged and simultaneously elastically preloaded under the relative displacement of the plurality of separate cage parts (36, 63), said fastening means (press fit engagement between 36 and 63); **[claim 23]** wherein at least one of the first 36 and second 63 cage part includes a separate guiding portion, inner rim of the element 36 receiving element 63 and outer curved axially extending protrusion on an outer circumference of element 63, for radial centering and guiding of the one of the first 36 and second 63 cage part with the other

of the first 36 and second 63 cage part; **[claim 24]** a guiding portion of the one of the first 36 and second 63 cage part has a rounded or inclined conical configuration, as defined by the rounded inner rim of element 36 receiving the rounded axial protrusion of element 63, so that a mating portion (rounded axial protrusion of element 63) of the other of the first 36 and second 63 cage part is automatically lead into a correct position during locking of the one of the first 36 and second 63 cage part and the mating portion (rounded axial protrusion of element 63) of the other of the first 36 and second 63 cage part; **[claim 31]** a first 36 and second 63 cage part, wherein one of the first 36 and second 63 cage parts has a cylindrical wall forming a carrier-side engagement area (as defined by the inner circumference of element 63, inside of an outer bent portion of element 63 that is press fit with element 36, which abuts a flat surface of element 9 below element 12 as shown in figure 12) with which the multi-part cage assembly (4,5, 36, 37, 63) is accommodated in the carrier 9 (the surface of element 63 bears on the surface of the element 9 that is recessed and therefore "in" the carrier);.

Hinz fails to teach the limitations for a supply device that are taught by Schuller for a supply device including a carrier 68 and a cage assembly 54 including: **[claim 16]** as least two components forming an assembly, elements 64 and 68, associated with the cage assembly 54, as element 64 houses assembly 54 and element 68 is proximately located near element 54 by connection with element 64, are fastened together where in a first component 68 has locking arms 80 that fit into fastening means of a second component 64 including recesses or holes 72 for receiving the locking arms 80 of the first component; **[claim 19]** and each of a first and second component (64, 68), includes

fastening means (72 and 80 respectively) that are provided in pairs and lying diametrically opposite each other, as exemplified in figure 2 with respect to element 80 of element 68.

Schuller teaches a fastening mechanism by way of detent connection between a carrier and a closure for a supply device. Schuller teaches that the fastening means has the advantage that it can be done and undone by simple means and components of the supply device no longer have to be crimped together. A modification to Hinz in which a detent connection was formed on one of elements 36 or 63, and engaging arms were formed on opposite component where detent was not made, would provide a reliable connection between components that did not require the use of a separate tool but also facilitated disassembly. It would have been obvious to one having ordinary skill in the art the time the invention was made to modify a connection between components of a cage assembly that receives a piston in a supply device, as taught by Hinz, to have a detent connection, as taught by Schuller, in order to provide an easy means for assembly and disassembly that did not require the use of a tool such as a crimping tool (Schuller - col. 1 ll. 51-57).

A combination of Hinz and Schuller does not explicitly teach holes on one cage member which engage arms on a second cage member. Schuller teaches a detent connection in which arms 80 slide over a lip 72 to make a snap fit. A snap fit between two members in which a first member is passed or slid over an opposite second member created by a detent connection is commonly accomplished by either arm or depression in an otherwise continuous surface of the first member, interlocking with an

engagement feature of the second member. This is commonly accomplished by either a depression or arm on a first member engaging a recess, hole, or bulge on the second member. Schuller teaches the latter of the three but the embodiment shown in figures 14-16 of Grieff teaches a cage (8, 120) for a piston pump used as a supply device for brake system with a detent connection formed by an arm 123 on one cage member 120 that engages a hole (bore) 124 on a second cage member 8. Risch teaches a detent connection in which more than one arm, 65 and 66, and one hole, 63 and 64, are used to assemble a first 60 and second 7 cage part. In the embodiment of figure 32 Risch also teaches arms, 71 and 72, on a first cage part 60 that engage recesses, 73 and 74, on a second cage part 60, where only one edge of the recesses are necessary to make the engagement. Essentially the inner edges of recess 73 and 74 provide a lip around which arms 71 and 72 engage for a snap fit in the same manner that is taught by Schuller. Grieff and Risch stand for the proposition that it was known in the art at the time the invention was made to provide cage parts for housing a resetting spring of a piston pump in which one cage part engages a second cage part with arms and holes on respective parts. Risch stands for the proposition that it was known in the art at the time the invention was made to provide at least two holes and two arms as well as the proposition that making a snap fit by way of a detent connection between cage parts in which an arm on one member engaged a hole on a second member was equivalent to an arm of one member fitting around a lip of a second member.

A combination of Hinz and Schuller discloses the claimed invention except that a detent connection is formed using arms and lip instead of arms engaging holes. Risch

shows that connections for cage parts for a piston pump used in brake system that utilize arms that connect to holes was an equivalent structure known in the art. In order to rely on equivalence as a rationale supporting an obviousness-type rejection, the equivalency must be recognized in the prior art. *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958). Risch represents evidence that detent connections for cage parts for a piston pump used in brake system that utilize arms that connect to holes were art-recognized equivalent structures for detent connections in which arms engaged a lip. Therefore, because these two snap fit cage assemblies were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute connections for cage parts for a piston pump used in brake system that utilize arms that connect to holes for a set of arms of a first member that engage a lip of a second member. An express suggestion to substitute one equivalent component or process for another is not necessary to render such substitution obvious. *In re Fout*, 675 F.2d 297, 213 USPQ 532 (CCPA 1982).

Allowable Subject Matter

8. Claims 25-28 are allowed.

Response to Arguments

9. Applicant's arguments with respect to claims 16, 19, 23, and 24 have been considered but are moot in view of the new ground(s) of rejection.

The examiner does take note of applicant's arguments that a combination of Hinz and Schuller does not teach the limitations as claimed because there is no teaching that (a) the components 36 and 63 are press fit together or (b) that a spring 4 is preloaded.

- a. **Response:** Hinz shows two embodiments of a cage assembly in figures 5 and 12. One difference between these embodiments is that the embodiment of figure 5 shows a filter integrally formed from a side of the cage 36 opposite to side through which a piston extends. The embodiment of figure 12 shows a filter 63 that is separate from a cage 36 but one that appears to be press fit to an upper lip of the cage 36. Even if elements 63 and 36 are not press-fit together, Hinz contemplates an embodiment with figure 5 in which these components are connected together. Modifying the embodiment of figure 12 such that a filter 8 includes several detent sections that engage with a collar, recess, or holes formed on the cage 36 would provide a combination of the embodiments of figures 12 and 5. A filter would be securely connected to a cage 36 in a manner substantially equivalent to being formed integrally with the cage, as in figure 5, but also provide the flexibility to disassemble a cage 36 and change out parts such as a spring 4 or piston cover 5 afforded the embodiment of figure 12.
- b. **Response:** The examiner notes that in the instant application it is disclosed that "[u]pon delivery of the cage subassembly, however, the spring retainer 19 bears against an inside surface of brim 29." US application 10/529159, pg. 6, ¶3. This is in addition to the disclosure that follows includes "[t]he cage parts . . . are locked . . . relative to each other, while preloading the resetting spring 5 simultaneously." Id. at pg. 7. However by the disclosure on page 6 this preloading amounts to a spring pressing a retainer against a brim. This would be the same result in Hinz if just the cage 4 and bowl-type spring

retainer 63 are positioned in an accommodating member 1. The spring retainer 5 would rest against the inner surface of element 37 and be preloaded to point disclosed in the instant application. Therefore Hinz teaches a preloaded spring according to applicant's disclosure

10. This action is properly made final in view of the applicant's amendment to claim 16 which removed certain limitations previously presented in the independent claim. By this amendment the applicant broadened the scope of the claim to the point where the original references applied in the office action June 8, 2009 no longer provide the most significant rejection as evidenced by the fact that the claim is not only rejected under 35 U.S.C. §103(a) but under 35 U.S.C. §102(b) over a different prior art reference.

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEONARD J. WEINSTEIN whose telephone number is (571)272-9961. The examiner can normally be reached on Monday - Thursday 7:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
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